

Claims:

1. A muffler comprising:
  - a housing having a first section and a second section selectively removable from the first section, the first section including a side wall defining a chamber;
  - 5 a selectively removable insert received in the chamber, the insert comprising,
    - a sound diffuser extending along a longitudinal axis of the housing; and
    - a spacer for spacing the sound diffuser from the side wall of the
    - 10 housing, wherein the spacer abuts the side wall of the housing; and
    - a coupling for selectively attaching the first section of the housing to the second section of the housing.
2. The muffler of claim 1, wherein the spacer comprises a first rib attached to the sound diffuser, wherein the muffler further comprises a second rib attached to the sound diffuser and spaced from the first rib, wherein the ribs extend approximately parallel to the longitudinal axis of the housing.
3. The muffler of claim 2, wherein the ribs are rectangular in a cross section taken normal to the longitudinal axis and the ribs attach to the sound diffuser at a narrower side of the ribs.
4. The muffler of claim 2, wherein each rib abuts the sidewall along substantially the entire length of the rib.
5. The muffler of claim 2, wherein the second section includes an end wall and a conduit extending away from the end wall, wherein the conduit is in communication with the chamber, wherein the ribs of the removable insert abut the end wall of the tail pipe section when the tail pipe section
- 5 attaches to the housing.

6. The muffler of claim 1, wherein the spacer comprises a ring attached to the sound diffuser oriented substantially normal to the longitudinal axis of the housing.

7. The muffler of claim 1, wherein the coupling comprises a ring-shaped member.

8. The muffler of claim 1, wherein the second section includes an end wall and a conduit extending away from the end wall, wherein the conduit is in communication with the chamber.

9. The muffler of claim 1, wherein the sound diffuser comprises a coiled member including an elongated element having at least one of a U-shaped and a V-shaped cross-section.

10. The muffler of claim 9, further comprising a stiffener attached to the coiled member, the stiffener being spaced from the ribs along a periphery of the coiled member, wherein the stiffener is located adjacent an end of the coiled member.

11. The muffler of claim 1, further comprising a plate attached to the spacer, wherein the plate is situated adjacent an end of the diffuser substantially normal to the spacer, wherein the plate blocks direct airflow along a longitudinal axis of the sound diffuser.

12. The muffler of claim 10, further comprising a ring attached to the spacer, wherein the ring is situated adjacent an end of the sound diffuser opposite the plate and the ring is situated substantially normal to the spacer.

13. The muffler of claim 1, wherein the insert comprises a first material having a first thermal expansion rate and the housing comprises a second material having a second thermal expansion rate, wherein the first thermal expansion rate is greater than the second thermal expansion rate.

14. A muffler comprising:  
a housing including a sidewall defining a chamber, a first section, a removable second section, an inlet opening to allow exhaust to enter the chamber and an outlet opening to allow exhaust to exit the chamber;  
5 a selectively removable insert received in the chamber, the insert including a spacing member affixed to a sound diffusing member, wherein the spacing member engages the side wall of the housing to space the sound diffusing member from the side wall of the housing; and  
a coupling for selectively attaching the housing first section to  
10 the housing second section.

15. The muffler of claim 14, wherein the spacing member comprises a ring oriented approximately normal to a longitudinal axis of the housing.

16. The muffler of claim 15, wherein the ring includes a plurality of tabs extending outwardly from the ring, wherein the tabs abut the side wall of the housing.

17. The muffler of claim 14, wherein the ring includes a plurality of extensions projecting approximately normal to the ring.

18. The muffler of claim 14, wherein the sound diffusing member comprises a cylindrical body including a plurality of holes.

19. The muffler of claim 18, further comprising sound altering material interposed between the sound diffusing member and the side wall of the housing.

20. The muffler of claim 19, wherein the sound altering material includes fiberglass.

21. The muffler of claim 14, wherein the housing first section includes a flange and the housing second section includes a flange, wherein

the flanges abut one another when the first section attaches to the second section and the coupling contacts the flanges.

22. The muffler of claim 21, wherein the coupling includes a substantially ring-shaped band having a first end that is adapted to be drawn toward a second end when the band is tightened.

23. The muffler of claim 22, wherein the coupling includes a first side wall and a second side wall, each side wall depending from the ring-shaped band, wherein the side first side wall contacts the first flange and the second side wall contacts the second flange when the coupling attaches the  
5 housing first section to the housing second section.

24. A muffler comprising:

a housing having a side wall defining a chamber, the housing including a first section and a removable second section, wherein each of the first section and the second section includes a flange;

5 a selectively removable insert received in the chamber of the housing; and

a coupling for selectively attaching the housing first section to the housing second section, wherein the coupling includes a band having a first side wall depending from the band and a second side wall spaced from  
10 the first side wall and depending from the band, wherein the side walls contact the flanges when the coupling attaches the first housing section to the second housing section and wherein the flanges abut one another when the first section attaches to the second section when the coupling is installed.

25. The muffler of claim 24, wherein the sound diffuser comprises a cylindrical coiled member.